

THURSDAY, AUGUST 6, 1914.

THE NEW BRITISH FLORA.

The Cambridge British Flora. By Dr. C. E. Moss. Illustrated from drawings by E. W. Hunnybun. Vol. ii., Salicaceæ to Chenopodiaceæ. Pp. 206+206 plates. (Cambridge: University Press, 1914.) Price 2l. 10s. net.

THERE can be no difference of opinion as to the need for a new, comprehensive, and authoritative British flora. Our knowledge of British plants has increased and broadened to an extent which renders the "English Botany" quite inadequate for critical work. Sir J. E. Smith's "English Botany," with the admirable illustrations by James Sowerby, goes back to the early years of last century; and the third edition, with its much inferior illustrations, is, from the point of view of the modern worker, almost equally out of date. One of the most important changes which has influenced British botany during the last half-century is the comparative study of our flora and that of other European countries. Prof. C. C. Babington was one of the first to appreciate the importance of this relation, and his manual, now in its ninth edition, is still regarded as the most critical presentation of the botany of the British Isles. It is appropriate that Babington's successor in charge of the Cambridge Herbarium, and the Cambridge University Press, should be jointly responsible for a comprehensive and up-to-date presentment of the same subject.

It goes without saying that Dr. Moss has entered upon a difficult piece of work. The treatment adopted, as illustrated by the one volume which has already appeared, shows that the work is to be no mere compilation, but that it will record the results of a thorough critical study of each group. The full meaning of this will be realised only by those who have followed the detailed study of the flora of north and central Europe, of which our own forms a part, during the past few decades. Dr. Moss has special qualifications for this work, but to bring such an undertaking to a satisfactory completion within reasonable time is more than one man's task, and we are glad to note that Dr. Moss has promise of help from various botanists who have made a speciality of certain groups. We trust that he will make use to the fullest extent possible of this expert assistance.

The plan of the book is fully explained in the introduction. The systematic arrangement of the groups is that of Engler's "Syllabus," an arrangement which is now in general use on the continent of Europe and also in

America. Following the recommendations of the International "Rules of Nomenclature," Dr. Moss uses the term "family" in place of "natural order," while the "order" is a group of higher rank—an aggregate of families. Except in a few minor points, Dr. Moss follows the "Rules," to a discussion of which he devotes several pages. He does not, however, fully appreciate the advantage of rules, namely, that you follow them, but sometimes goes out of his way to assert an individuality in matters of trifling importance. Short but adequate descriptions are given of the orders, families, and genera; those of the species are generally longer, the length varying with the needs of the case; under the species the different varieties and forms are sufficiently described; subspecies are not recognised. Synonymy, references to published figures and exsiccata are quoted in so far as these are helpful to the student of British plants; and the distribution in the British Isles and also the general distribution are given. British distribution is in many cases illustrated by outline maps. In his concept of species Dr. Moss has steered a middle course between the larger view as typified by Bentham's work and the *petit espèce* of the French botanist, Jordan.

In the present volume (vol. ii.) the earlier orders of Dicotyledons are treated, comprising the catkin-bearing families, which, with Ulmaceæ, Cannabaceæ, and Urticaceæ, form the subclass Amentifloræ, Santalaceæ, Loranthaceæ, Aristolochiaceæ, and Polygonaceæ, forming the subclass Petaloideæ, and Aizoaceæ, Amarantaceæ and Chenopodiaceæ, forming a portion of the subclass Centrospermæ. As this list indicates, plants are included which, though not indigenous, are more or less definitely naturalised, such as *Mesembryanthemum edule* (Aizoaceæ), a native of the southern hemisphere, and the American *Amarantus retroflexus*. The accurate recording of the occurrence of plants of this category is of special interest with a view to their future behaviour as items of our flora. The genus *Betula* has been elaborated by the Rev. E. S. Marshall, and in the family Chenopodiaceæ Dr. Moss has had the assistance of Mr. A. J. Wilmott (*Atriplex*), Mr. C. E. Salmon (*Salsola*), and Dr. E. J. Salisbury (*Salicornia*).

The text is very clearly printed, and the contrast of type is well-selected and helpful. A little more space might with advantage have been allowed between each family, and the typographical subordination of the genus-name is somewhat disconcerting until one gets used to it; but the general effect is dignified. A good portrait of John Ray forms a fitting frontispiece.

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The plates are a special feature of the work. The generous gift to the university by Mr. Hunnybun of his series of pen-and-ink drawings of British flowering plants was, we believe, the immediate cause of its inception. A characteristic is that each drawing is made from an individual plant in the fresh state—no attempt has been made to give an abstract idea of the form, variety, or species figured. The drawings have been reproduced by photography and are remarkably clear, and sometimes very delicate representations of the whole or part of the plant; the details of floral structure are, however, often too small or incomplete. The wealth of illustration may be judged from the fact that the present volume contains no fewer than 206 plates.

The work is to be completed in about ten volumes, which, so far as is practicable, will be issued annually; each volume may be had in two parts, text and plates respectively, or, at a somewhat higher price, in one part, with the plates mounted on guards and interspersed with the text. Vol. i. has been set apart for conifers and ferns, and mosses, hepatics, and charas may also be included.

A. B. R.

GEOGRAPHICAL GUIDES.

- (1) *Junk's Natur-Führer. Die Riviera.* By Alban Voigt. Pp. vi+466+vi plates. (Berlin: W. Junk, 1914.) Price 7 marks.
- (2) *Einführung in die Erdbeben- und Vulkankunde Südtaliens.* By August Sieberg. Pp. vi+226. (Jena: Gustav Fischer, 1914.) Price 4 marks.
- (3) *Cambridge County Geographies. Merionethshire.* By A. Morris. Pp. ix+166+2 maps. *Northumberland.* By S. Rennie Haselhurst. Pp. xi+181+2 maps. (Cambridge University Press, 1913.) Price 1s. 6d. each.
- (4) *The Madras Presidency. With Mysore, Coorg, and the Associated States.* By E. Thurston. Pp. xii+293. (Cambridge University Press, 1913.) Price 3s. net.

(1) **T**HE first of Junk's Natur-Führer, Dalla Torre's volume devoted to Tirol, was reviewed in this journal in December, 1913 (vol. xcii., p. 471). Alban Voigt's treatment of the Riviera differs entirely from the method adopted by his predecessor. In Tirol we were given minute references to the objects of interest along roads and footpaths, so that the scientific traveller alighting at an inn might look round before dinner for rare birds or for the traces of historic earthquakes. The guide-book to the Riviera is almost entirely devoted to a comprehensive review of the plant-life of the country, and the index contains

plant-names only. Due stress is laid (p. 284) on Sir Thomas Hanbury's garden at La Mortola, a hamlet between Ventimiglia and Mentone, and 135 pages are occupied with an account of the cultivated plants, though these are not native to La Mortola. The geology of the district is treated in fifteen pages, and twelve more are given to the famous prehistoric caves of Mentone. It is clear that the greater part of this "guide-book" will be quite as useful in the library as in the field, and the description of the native flora in relation to its environment makes an appeal to every modern botanist. As examples of the author's historical method, we may mention the disquisition on *Ferula nodiflora*, the source, according to Martial, of scholastic "ferules" (p. 123), and the account of the recent immigration of *Lepidium draba* (p. 211), a steppe-plant that, like the Huns, has followed the Danube and then descended into Roman territory. The appearance of this book in Junk's series may herald further surprises. Will the promised Swiss volume prove to be an authoritative work on mountain-structure?

(2) The visitor in Italy cannot fail to become interested in volcanoes, and A. Sieberg's review of the volcanic and earth-shaken areas might well be translated into several languages. The author is on the staff of the seismological institute at Strassburg. He shows clearly how the volcanic zone is connected with the folded structure of Italy as a whole, and with the fractured and sunken basin that is now flooded by the Tyrrhenian Sea. The review of the recent history of Vesuvius is exactly what the intelligent visitor requires, and the form of the mountain is shown to depend on a series of events going back to the building of Monte Somma, which is the "first phase" indicated by Johnston-Lavis. F. A. Perret's beautiful photographs are used for many of the illustrations, and those of eruptions on Etna are especially welcome. The author's own pictures are admirable, though he has, with unusual self-denial, converted some of them into diagrams. Personal observations, such as those on the polygonal soil formed by moving ash (p. 155), add to the interest throughout a very readable book. The Æolian Islands are effectively included; J. W. Judd's papers, published in the *Geological Magazine* about 1876, should be mentioned in the useful bibliography. While accepting steam as a constituent of lava-flows, the author wisely refrains from dogmatizing as to the gases of paroxysmic outbursts.

(3) The Cambridge County Geographies are continued with Merionethshire and Northumberland. Their only defect is that no single author can deal equally with the geological basis, with